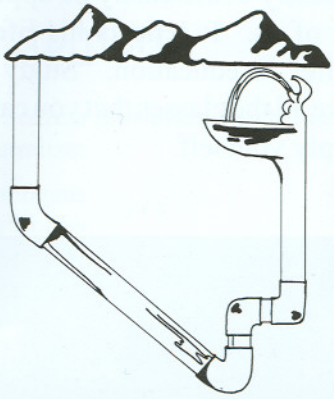
Water Lines



***Water Lines*** is the resource newsletter and calendar of the Nevada Drinking Water and Wastewater Training Coalition.

Volume 25 Summer 2007 Issue

## Inside this issue....



***Special Insert:***
***EPA Update***

Water Lines is funded by the Nevada Division of Environmental Protection

Editor, Brent Farr, P.E.

Editor, and Production, Joe Beard Jr.

# Featured Operator: Fred Minchen

*By Joe Beard Jr., Farr West Engineering*

Featured System

Some people work in the water industry for fun. That is what it seems like when talking to Fred Minchin, who recently retired after 19+ years at the Gold Ranch Casino in Verdi. Before working at the Gold Ranch Fred had already retired with 35 years as an engineer at Nevada Bell which included an early career as a radio systems engineer at the Nevada Test Site.

*Fred Minchen*

Fred has a strong belief in education, and after retiring from Nevada Bell he enrolled in school at Truckee Meadows Community College and took classes in Hotel Management. At a very young 60 years of age, he decided to go to school for Slot Mechanics. Then, to stay busy, he got a job at Jim Kelly's Nugget; and from there went on to become Assistant to the General Manager of the Gold Ranch Casino. He worked at the Gold Ranch for 19+ years before his second retirement.

The Gold Ranch Casino is perched on Interstate 80 close to the border between Nevada and California. It is surrounded by tall pines, steep mountains and has the beautiful Truckee River as a close neighbor.

The water system at the Gold Ranch serves a mini mart, gas station, café, fast food restaurant, swimming pool, the casino and over 100 deluxe RV sites. There are over 100 employees at the complex. Keeping this type of system running can be a challenge. That isn't a problem for Fred, who says, "For this job, you have to wear many hats, and I like that."

One of the challenges came during the drought years. Water was not entering the well fast enough and silt was drawn into the pump. This condition can quickly do serious damage. With the help of an engineering firm, Fred and his team used primer cord and a blast to clear the silt from the well screens. For a guy who loves learning, it is not surprising that Fred found the new procedure "fun and interesting."

Another on the job challenge was when they expanded the RV Park. They had to move a 12" distribution main. In order to cause the least amount of disruption, the new pipe had to be completely installed and ready to switch over. All work took place during the night. The challenge was to connect and disinfect the new system quickly and without obstacles before morning. Luckily Fred loves a challenge.

The water supply for Gold Ranch comes from two wells. The main well is 700' deep and has 12" casing. It pumps at 135 gal/min. The main storage tank holds 200,000 gallons. The second well is 400' deep and has

*(Continued on page 2)*

## Featured Operator: Fred Minchen

(Continued from page 1)

a 50,000 gallon storage tank. Storage is very important to this system. The Gold Ranch's location on the eastern slope of the Sierra Nevadas has the added risk of forest fire.

When asked what he is most proud of during his career in Verdi, Fred says that implementing a web-based water level indicator was of great value. During their rounds the security folks used to have to climb a steel ladder on the main tank every few hours to check the water level. Not only was this dangerous and difficult at certain times of the year, but is very time consuming. The new system is working very well, saving money and time.

You may have guessed that Fred is the type of person who likes to stay busy. In his second retirement he plans to do a lot more traveling and spending time with his family who he says are his "greatest asset."

He is very happily married and he and his wife have raised four daughters and now have seven grandchildren, seven great grandchildren and a great-great grandchild on the way. In his spare time, he has taken up digital photography, computer science and target practice. We can be sure that he will not rest until he has completely mastered these activities as well!

Fred's advice to young folks who are considering a career in the water industry could easily be applied to all of us. It reflects his life-long belief in education, "Study hard, take all the classes that you can and, apply yourself.

*Water Storage Tank at Gold Ranch*

## Safety Zone: Well Construction Safety

*By Stevan Palmer, RCAC*

As a utility worker, you are probably aware that the Occupational Safety and Health Administration (OSHA) is the federal agency that establishes regulations regarding the safety aspects of day-to-day operations. OSHA helps to protect worker safety and health through partnership programs, education and outreach, compliance assistance, and enforcement.

Under certain circumstances, such as when contract drilling companies are drilling water wells related to mine operations, the Mine Safety and Health Administration (MSHA) becomes the controlling authority on the construction site. MSHA regulations define a miner as any person who is "regularly exposed to mine hazards" (30 CFR 48.22 (a)(1)). Drilling contractors fall under this category, and as such are required to receive appropriate safety training and conform to all relevant MSHA guidelines as they perform their duties.

As a utility worker, if you frequent the drill site or perform any work around the site, even if it is unrelated to the construction of the well, then you may also be required to receive hazard training. The MSHA Program Policy Manual Part III 48.2(a)(1)/ 48.22(a)(1) states that a person "not engaged in the.... production process, not regularly exposed to mine hazards, or inconsequently exposed to mine hazards must receive the appropriate...hazard training. The drilling contractor, as the construction site operator, must provide and document this training, which should include the following:

- Site specific hazard recognition and avoidance
- Emergency and evacuation procedures
- Health and safety standards, rules and working procedures
- Use of self-rescue or respiratory devices
- Any other instruction that may be required based on circumstances and conditions

Even though the legal responsibility for providing this training falls on the operator, it is your health and safety as a utility worker that is at stake. Make sure you understand the hazards and safety protocols associated with utility work associated with mine operations.

# The Spigot Q & A: Focus on Treatment

Q 1. Sodium thiosulfate can be used to neutralize:

a. Pathogens
b. Coliforms
c. Chlorine
d. Alkalinity

Q 2. A particle count of 3 log is the same as:

a. 9.00%
b. 99.00%
c. 99.9%
d. 99.99%

Q 3. Turbidity spikes can be avoided when a filter is first put back into service by:

a. Using surface washers
b. Pumping water through a surge tank
c. Filter to waste piping
d. Prolonging filter runs

Q 4. In a conventional treatment plant, the minimum time allowed between turbidity samples is:

a. 4 hours
b. 6 hours
c. 8 hours
d. 12 hours

Q 5. Your chlorine demand indicates:

a. The quantity of reducing agents
b. A high alkalinity
c. A high pH
d. A low pH

---

*Crystel Montecinos, Consultant, Tigren Inc., prepares* The Spigot.

*Thanks to the California Rural Water Association for this month's material.*

**Answers to Spigot**
**1.C; 2.C; 3.C; 4.A; 5.A**

# Membrane Technology in Wastewater Treatment

*By Stephen Long, City of Reno*

In 1748, a French Physicist named Jean Antoine Nollet first documented a phenomenon known today as osmosis; the process by which water diffuses through a semi-permeable membrane, moving from a liquid solution with fewer contaminants to a liquid solution with more contaminants until equilibrium is reached.

Two hundred years later, researchers manipulated this phenomenon to create the first reverse-osmosis system. They found that by applying energy (in the form of pressure or a vacuum) to the liquid solution with more contaminants, the water could still move through the membrane, leaving the contaminants behind and discharging clean water. In other words, water can be directed under pressure or in a vacuum through thin membranes to remove even tiny particles such as salts, viruses, pesticides, and most organic compounds.

Reverse-osmosis (RO) systems were the first type of membrane system to be used in advanced wastewater treatment. These early applications were specific to water reclamation/reuse and groundwater recharge and were limited geographically to areas facing water shortage. Reverse-osmosis systems can be used to remove soluble ions, dissolved solids, and organic materials from high-quality tertiary effluent to polish final effluents for reuse or for groundwater recharge.

Several additional types of membranes have been developed. The classifications of membranes primarily used in wastewater treatment include the following:

· Micro filtration (MF) 0.1-10 Microns* and operating pressure 1-45 psi

· Ultra filtration (UF) 0.01-0.1 Microns and operating pressure 3-80 psi

· Nano filtration (NF) 0.001-0.01 Microns and operating pressure 70-220 psi

· Reverse-osmosis (RO) <0.001 Microns and operating pressure 800-1200+ psi

It is important to note that membranes were used to treat drinking water long before wastewater treatment applications became viable. Tighter environmental regulations coupled with recent developments in membrane-manufacturing technology have made the use of a broader range of membrane processes more appealing, practical, and economical in the fields of wastewater treatment, manufacturing and drinking water treatment.

*A micron is 1/1000mm or 1/1,000,000 meter. The majority of virus particles range in size from 10 to 300 nanometers (1 billionth of a meter)

# Featured System: Silver Springs Mutual Water Company

*By Joe Beard Jr., Farr West Engineering*

Silver Springs Mutual Water Company (SSMWC) was incorporated in 1952. It was held privately for over forty years, during which time the town of Silver Springs developed at a modest pace. In 1994, the water company was incorporated into a quasi-municipal non-profit water company.

SSMWC currently serves approximately one thousand customers. The system is comprised of four wells, two pressures zones, and two storage tanks, each with a capacity of one million gallons. The system is monitored by telemetry. The utility anticipates the construction of one new well in the near future.

Silver Springs, along with many places in Nevada, is benefiting from regional economic development. One example is the Tahoe-Reno Industrial Complex (TRI). The TRI Complex will eventually stretch from I-80 to Silver Springs, with major tracts of land being developed west of State Highway 95. All of this growth will provide jobs for local residents and contribute to the tax base.

The anticipated economic growth in this area will also necessitate further development of groundwater resources. SSMWC is currently considering importing groundwater from other areas. Long-term planning will be key to the wise development of the community, and the best utilization of local natural resources.

In the short-term, the Director of SSMWC is taking on the challenge of funding needed utility improvements. One possible solution being investigated would be to modify language regarding eligibility for State grant funds authorized in 1991 Assembly Bill 198 (AB 198).

The AB 198 Program was created by the Nevada State Legislature in 1991 to provide grants to publicly-owned community water systems in order to meet the requirements of the Safe Drinking Water Act. Currently, non-profit water companies are not eligible for AB 198 funds. The SSMWC has been lobbying the Legislature to change the eligibility guidelines. There are eleven non-profit water systems throughout the State that could potentially benefit from such a change.

Silver Springs Mutual Water Company has several projects that meet AB 198 requirements. Upon eligibility, SSMWC could begin projects that currently lack funding. Without the availability of AB 198 grant monies, the ability to fund projects is limited.

Another goal of the utility is to combine SSMWC with the General Improvement District (GID) that currently handles the wastewater for the town of Silver Springs. The combined utility could provide services more efficiently, and provide for better management of local natural resources. Another benefit of the combination would be eligibility for AB 198 funding, as GIDs are covered in AB 198 guidelines.

SSMWC has demonstrated the ability to solve daily problems as they arise, and oversee long-range plans.

*Look for another picture on page 7*

# Survey on Operator Training: Evening and Weekend Interest

*By Bob Foerster, NvRWA, NTC Chair*

The NTC has received feedback from local Operators regarding the availability of training. Some of the comments indicate that there is a desire for training opportunities at night, and also on the weekend. The NTC strives to be responsive to training needs.

This survey form has been created in order to ascertain the demand from our readership for these kinds of training opportunities. We would appreciate your input!

The results of this survey will be shared with the agencies currently conducting Water and Wastewater Training in the state. As an active member of the water / wastewater community, please take the time to respond!!

---

I need Water T D Training / level? _____ Wastewater Training T C / level? _____

I represent / am employed by _____

Location where I usually attend training _____

Any other locations _____

Able to obtain required hours for Certification Renewal last cycle? yes _____ no _____

If no, please discuss reasons in comments section below.

Training you were unable to attend in the last two years? _____

_____

_____

Please check all that apply:

- ☐ I am only able to attend training events scheduled at night (after 5 p.m.).
- ☐ I am only able to attend training events scheduled on the weekends.
- ☐ I am interested in attending training events scheduled at night (after 5 p.m.).
- ☐ I am interested in attending training events scheduled on the weekends.
- ☐ I can attend training events at any time.
- ☐ I am unable to attend training on weekends.
- ☐ I am unable to attend training at night on weekdays.

Please fax to:

Bob Foerster
at NvRWA

(775) 841-4243

Any other comments _____

_____

_____

_____

## 2007 NvRWA Conference

*By Bob Foerster, NvRWA, NTC Chair*

The Nevada Rural Water Association's 17th annual conference was well attended; with operators, managers, board members and vendors at Harrah's Reno on March 13 - 15, 2007. Twenty-five attended using the SRF Scholarship Program. Both the water and wastewater certification exams were offered on Friday, with nearly sixty sitting for water distribution and treatment certification exams. A special thanks goes to the Conference Sponsors: Western Nevada Supply, John Deere Co., Sierra Chemical Co., Energy Laboratories, Christy Concrete Products, G3 Engineering, DYK, Inc., American Flow Control, Mueller Company, TESCO Controls, Water Remediation Technology, LLC, and HyDEC Corp.

At the Awards Luncheon on Thursday, Mike Workman of Lyon County Utilities was named Manager of the Year. The Wastewater Operator of the Year went to Skeet Sellers, also of Lyon County Utilities. Administrative Person of the Year for 2007 is Teri Feasel of Carlin Utilities. Tom Rouch of Douglas County Utilities was named Water Operator of the Year. All of them are very deserving of this peer recognition for their hard work and service to their respective communities. The NvRWA Annual College / Vocational Scholarship award goes to Amanda Brownlee of Fallon.

This year, Storey County Water System, which serves Virginia City, won the *Best Tasting Water in Nevada* contest. The contest involves not only taste, but clarity, color and odor – just like fine wine tasting. The water was also part of the national contest at the National Rural Water Association Water Rally in Washington D.C. Mike Miller operates the treatment plant at VC – good work, Mike! The water travels thirty-some miles from Marlette Lake, through a pipeline originally constructed in 1883. The treatment plant was built in the late 1990s to bring the system into compliance with the Safe Drinking Water Act.

I hope to see you at next year's conference at Harvey's Lake Tahoe, March 11-14, 2008. Remember, NvRWA is your Association and this is your conference. We will have solid waste training in addition to the wastewater and water programs. Please let us know how to best serve you. Our mission statement is: *To provide the best available technology, resources, support, assistance and training to our members serving Nevada.*

## New Nevada Operators Certified

These operators passed water certification exams for distribution and treatment grades 1, 2, 3 and 4. Congratulations to all !

### Distribution grades 1, 2, 3 and 4

**D-1**: Alosi, Keith; Andermann, Nickolas; Barrett, Ronald; Bowler, Ryan; Castillo, Gabriel; Christopher, Michael; Cordova, Jerry; Corsi, James; Demangate, Daren; Esenarro, Joseph; Garcia, Leroy; Gibbons, Joe; Gibbs, Brian; Groves, Dale; Hanson, Erik; Heath, Brandon; Ingalsby, John; Keehne, Charles Jr.; Lamb, Russell; Ligget, Dan; Maxon, Jack III; McCauley, Timothy; McCormick, Craig; McKinney, Tricia; Miller, Delmar; Mortenson, William; Mothershead, David; OBrien, Thomas; Pribyl, Pete; Seng, Joseph; Shaughnessy, John; Sheridan, John; Sumpter, Walter; Teepe, William; Tench, Leslie; Volk, Stephen; Walker, Michael; Whitfield, Darius; William, Sheers

**D-2**: Adams, Nathan; Andrews, Dianna; Baker, Steve; Caldwell, Matthew; Cole, David; Flores, Holly; Hamilton, Jerry; Hess, Timothy; Katt, Karl; Kollodge, Michael; Lyons, Henry; Mayers, Robert Jr.; McCann, Robert; Miller, Paul; Mills, Philip; Shaw, Jason; Sutton, Travis

**D-3**: Bailey, Michael; Bendorf, Jeff; Bradshaw, Kiley; Dalley, Lon; Fleckenstein, Scott; Hauck, Bill; Lovec, Mike; Shore, Ricky

**D-4**: Bueltel, John; Johnson, David

### Treatment grades 1, 2, 3 and 4

**T-1**: Estes, James; Johnson, Dale; Mann, Robert; McCauley, Timothy; Price, Werner; Pruitt, Dennis; Shanahan, Esther; Welch, Steve; Yasso, Keola

**T-2**: Mills, Richard

**T-3**: Delisle, Maurice

**T-4**: Bueltel, John

# Training Calendar for 2007

## 2007

**June 5** - Gardnerville- Math for Distribution Operators given by NvRWA. 5 Hours. Info: 775/841-4222.

**June 14** - Elko- How To Prepare ERP, VA, and CCR Documents given by RCAC. Info: Stevan Palmer at 775/323-8882.

**June 26** - Dayton- Math for Treatment Operators given by NvRWA. 5 Hours. Info: 775/841-4222.

**July 10** - Dayton- Microsoft Word Training given by NvRWA. 4 Hours. Info: 775/841-4222.

**July 11** - Dayton- Microsoft Excel Training given by NvRWA. 4 Hours. Info: 775/841-4222.

**July 17** - Hawthorne- Math for Distribution Operators given by NvRWA. 5 Hours. Info: 775/841-4222.

**July 24** -Hawthorne- Math for Treatment Operators given by NvRWA. 5 Hours. Info: 775/841-4222.

**July 24-26** - Reno/Sparks - NvRWA Training, Wastewater A to Z. Info: 775/841-4222.

**August 7** - Pahrump- Wastewater Management Opportunities given by RCAC. Info: Stevan Palmer at 775/323-8882.

**August 7** - Winnemucca- Microsoft Word Training given by NvRWA. 4 Hours. Info: 775/841-4222.

**August 8** - Winnemucca- Microsoft Excel Training given by NvRWA. 4 Hours. Info: 775/841-4222.

**November 27, 28** - Tonopah- Water Operation Certification Review given by RCAC. Info: Stevan Palmer at 775/323-8882.

**Notice** - In 2007, WEF, through a cooperative agreement with the EPA, will provide three, 3-day workshops in centralized locations across the U.S. on security and emergency response planning. Staff from POTWs treating 2.5 mgd or greater are invited to attend.

For more details on the WEF 2007 Wastewater Security Training Program, including online registration please visit - http://www.wef.org/watersecurity

You may also contact Matt Jones at mjones@wef.org or 703/684-2400 ext 7090.

This symbol designates Nevada Division of Environmental Protection pre-approved training for certification renewal contact hours. Other training may be eligible but is not yet pre-approved. Before attending any training, verify approval by contacting NDEP at 775/687-9527. For renwal contact hours, a different ratio applies to Safety training. Generally, one Continuing Education Unit (CEU) is equivalent to ten training contact hours.

**University of Nevada, Reno**
***Colleges of Agriculture, Biotechnology and Natural Resources & Cooperative Extension***
**2005 Videoconference Training Calendar: *www.unce.unr.edu/swp.wkshps.htm***

UNR videoconference classes for water system operators and managers are available in most communities. To request a workshop in your area, call Crystel Montecinos at 775/240-1396 or e-mail: xtelle@aol.com.

**Community College of Southern Nevada**
**Wastewater & Water Technology Program**
Info: LeAnna Risso, 702/434-6600 ext. 6418.

**WWET Training in Clark County**
Training for water treatment plant and distribution system operators, wastewater treatment plant and collection system operators, and other professionals working within these fields. Info: Jeff Butler 702/258-3296; see *www.wwet.org* for a current training calendar.

**State of Nevada Water Certification Exams**
All exams will be proctored on the date listed. Applications and fees are due to the state (Steve Brockway) 45 days before exam dates. A proctor will contact examinees to schedule testing. Contact Geoff Daforno at 775/846-1885 for information about 2007 exam dates.

**Nevada Rural Water Association**
Please send requests for training through nvrwa.org, or call 775/841-4222.

**Wastewater Certification Board Testing**

Wastewater certification exams are given quarterly. Info: 775/465-2045 or *www.nvwea.org.*

**Water Certification Board Testing**

Water exams are scheduled quarterly at locations throughout the state. Info: 775/687-9527 or http://ndep.nv.gov/bsdw/cert_home.htm.

## Featured System: SSMWC

*SSMWC Office in Silver Springs, NV*

# Nevada Drinking Water and Wastewater Training Coalition

**American Water Works Association California/Nevada Section**
*www.ca-nv-awwa.org*
909/291-2101
**Indian Health Service**
*Dominic Wolf*, 775/784-5327
**NDEP**
*http://ndep.nv.gov/bwpc/bwpc01.htm*
*Adele Basham*, DWSRF, 775/687-9488
*Michelle Stamates*, AB 198 Water Grant Program, 775/687-9331
*My-Linh Nguyen*, Wellhead Protection, 775/687-9422
**Nevada Rural Water Association**
*www.nvrwa.org*
775/841-4222
*Bob Foerster*, Executive Director
*John Allred*
*Curtis Duff*
*Teresa Taylor*
*Jonn Scovil*
*Andy Andersen*
*David Willard*
**Public Utilities Commission of Nevada**
*www.puc.state.nv.us*
*Mark Clarkson*, P.E., Water Engineer, 775/684-6132
Leslie Tench, Senior Engineering Analyst, 775/684-6140

**Bureau of Safe Drinking Water**
*http://ndep.nv.gov/bsdw/index.htm*
775/687-9520
*Jim Balderson*, SWAP, 687-9517
*Steve Brockway*, CEU approval, 687-9527
*Dana Pennington*, 687-9516
*Bert Bellows*, arsenic, 687-9525
**Nevada Water Environment Association**
*www.nvwea.org*
*775/465-2045*
*Starlin Jones*, 775/861-4104
*Eric Leveque*, 702/792-3711
**Rural Community Assistance Corporation**
*www.rcac.org*
775/323-8882
*Stevan Palmer, 775/750-1844*
**U.S. Environmental Protection Agency, Region 9**
*www.epa.gov/region09*
*Sara Jacobs*, 415/972-3564
**USDA Rural Development**
*www.usda.gov/rus/water/index.htm*
*Cheryl Couch*, 775/887-1222, ext. 22
*Kay Vernatter*, 775/887-1222 ext. 28
**University of Nevada, Reno Dept. of Civil Engineering**
*Dean Adams*, 775/784-1474
**Tigren, Inc.**
*Crystel Montecinos, 775/240-1396*

**UNR Natural Resources and Environmental Science and Cooperative Extension**
*www.unce.unr.edu/swp*
*Mark Walker*, 775/784-1938
**NDEP Board for Financing Water Projects**
http://ndep.nv.gov/bffwp/index.htm
**Water/Wastewater Education and Training Consortium of Southern Nevada — WWET**
*www.wwet.org*
*Jeff Butler*, 702/258-3296
**Farr West Engineering**
*Brent Farr, P.E. 775/851-4788*





**Farr West Engineering**
**5442 Longley Lane, Suite B**
**Reno, NV 89511**



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Adele Basham 5 31
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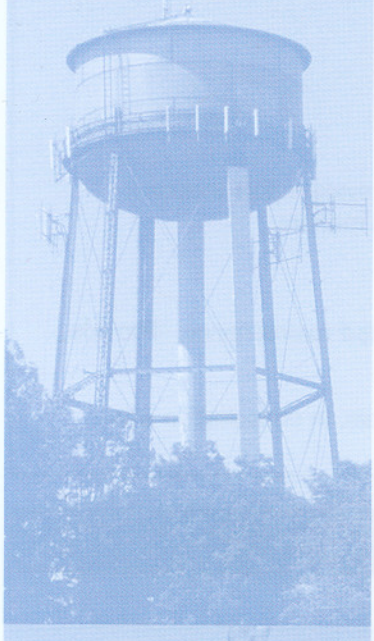
Carson City, NV 89701-5249

**Nevada Drinking Water and Wastewater Training Coalition**

*Water Lines*
**Summer 2007**

EPA
United States
Environmental Protection
Agency

# Water System Operator Roles and Responsibilities: A Best Practices Guide



| Introduction | |
|---|---|
| *Purpose* | This Guide will help you better understand:<br>◆ Your roles and responsibilities in delivering safe drinking water to your system's customers.<br>◆ Additional responsibilities, which can vary depending on your system size, characteristics (e.g., complexity of treatment), managerial structure, and regulatory requirements.<br>All system operators share several key responsibilities that are critical to meeting your ultimate goal - providing an adequate and safe supply of drinking water. |
| *Target Audience* | This Guide is intended for operators and owners of all public water systems serving fewer than 10,000 persons. |

## System Operation

*Keep all system components (i.e., source, treatment, storage, and distribution) functioning efficiently and effectively.*

### General Responsibilities

- Monitor chemical feed and other system components.
- Monitor effectiveness of treatment.
- Prepare and maintain records of meter readings, tests, equipment, chemical use, correspondence, and customer complaint log.
- Develop a maintenance plan for the treatment plant and distribution system.
- Regularly read meters and gauges, making adjustments as needed.
- Periodically flush distribution system using hydrants and blow-off valves.
- Conduct preventive and routine maintenance on facilities and equipment.
- Periodically assess efficiency of system components (e.g., pumps and valves).
- Conduct frequent system and security inspections.
- Update system maps when a significant change to the distribution system has been made.
- Make all process control/system integrity decisions necessary to maintain the quality and quantity of water delivered to customers.
- Attend training to meet state primacy agency's continuing education requirements.
- Create and follow standard operating procedures (SOPs).

**For additional information:**
Call the Safe Drinking Water Hotline at 1-800-426-4791, visit the EPA Web site at www.epa.gov/safewater/, or contact your state drinking water representative.

## Regulatory Compliance

*Comply with all relevant regulations to protect your customers' health.*

### General Responsibilities

- Develop and maintain a sampling plan, designed to protect the system, that covers all monitoring requirements.
- Collect or oversee collection of samples.
- Conduct routine inspections of wells or surface water sources and watersheds to identify potential sources of contamination.
- Address any problems quickly and ensure that all required follow-up steps are taken (e.g., additional sampling, public notification, sanitary survey or other compliance inspection).
- File all required reports and maintain records.
- Resolve any compliance problems, in consultation with regulators, and gather information on upcoming regulations. Increase awareness of tools, reference materials, and other state and federal resources.

## Communication

*Maintain a positive relationship with customers, regulators, and the system decision makers and keep them informed of your efforts to provide high quality drinking water.*

### General Responsibilities

- Report analytical results to regulators as required.
- Participate in the development and delivery of Consumer Confidence Reports (CCRs).
- Maintain, respond to, resolve, and keep a record of customer complaints.
- Communicate with the owner, manager, or board about technical and financial needs of your system (this includes training for recertification). Records should also be kept of any communication with decision makers.
- Inform the state of the results of technical improvements and their impact on the system.
- Inform the owner, manager, or board of any key findings from routine inspections and scheduled maintenance. Provide input for planning and preparing of equipment replacement.
- Develop and maintain a plan for monitoring system process controls and meet all related goals, in consultation with the system owner, manager, or board.

## System Security

*Protect your system against natural disasters and vandalism.*

### General Responsibilities

- Develop a plan to protect your facilities in case of an emergency, including updating your policies and procedures manual with security-related information.
- Inspect critical facilities and components, including door locks and fencing, as part of daily inspections.
- Store chemicals in locked areas with proper safety equipment.
- Maintain a list of written contacts for use in an emergency and make sure you know whom to contact in the event of an emergency.
- Exercise valves on a routine basis and make sure there are enough valves, in appropriate locations, to isolate parts of the system in the event of contamination.
- Attend security-related training if it is available.
- Educate other staff on emergency procedures and keep contact information up to date.